

STATE OF CALIFORNIA
Budget Change Proposal - Cover Sheet
 DF-46 (REV 08/15)

Fiscal Year 2016-2017	Business Unit BU_3930	Department Department of Pesticide Regulation	Priority No. 1
Budget Request Name 3930-001-BCP-DP-2016-GB		Program 3540_PESTICIDE PROGRAMS	Subprogram 3540055 - MITIGATION OF HUMAN HEALTH RISK

Budget Request Description
 Mitigation of Pesticide Impacts on Workers

Budget Request Summary

The Department of Pesticide Regulation (DPR) requests an appropriation of \$482,000 from the DPR Fund and 2.0 permanent positions to address the growing need to develop strategies to mitigate pesticide impacts on workers and bystanders. As DPR produces five risk assessments annually, there is an increased need to develop mitigation measures that address the unacceptable exposures identified in the risk assessments. This proposal includes ongoing contract funds for a facilitator (\$20,000) to lead public meetings and for mitigation research (\$150,000). With these ongoing funds DPR will be able to conduct activities and enter into contracts necessary to support the development and evaluation of practical and scientifically sound mitigation strategies to further protect fieldworkers, pesticide handlers, and bystanders.

Requires Legislation Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Code Section(s) to be Added/Amended/Repealed	
Does this BCP contain information technology (IT) components? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, departmental Chief Information Officer must sign.	Department CIO	Date
For IT requests, specify the date a Special Project Report (SPR) or Feasibility Study Report (FSR) was approved by the Department of Technology, or previously by the Department of Finance. <input type="checkbox"/> FSR <input type="checkbox"/> SPR Project No. Date:		

If proposal affects another department, does other department concur with proposal? ☐ Yes ☐ No
 Attach comments of affected department, signed and dated by the department director or designee.

Prepared By <i>Letford</i>	Date 08-21-2015	Reviewed By <i>John S. Ayhan</i>	Date 8-21-15
Department Director <i>Brian Beahm</i>	Date 8/21/2015	Agency Secretary <i>A. M. M.</i>	Date 8-21-15

Department of Finance Use Only

Additional Review: ☐ Capital Outlay ☐ ITCU ☐ FSCU ☐ OSAE ☐ CALSTARS ☐ Dept. of Technology

BCP Type: ☐ Policy ☐ Workload Budget per Government Code 13308.05

PPBA	Original Signed By: Ellen Moratti	Date submitted to the Legislature 11/7/16
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A. Budget Request Summary

DPR requests an appropriation of \$482,000 from the DPR Fund and 2.0 permanent positions to address the growing need to develop strategies to mitigate pesticide impacts on workers and bystanders. As DPR moves to produce five risk assessments annually, there is an increased need to develop mitigation measures that address the unacceptable exposures identified in the risk assessments. This proposal includes ongoing contract funds for a facilitator (\$20,000) to lead public meetings and for mitigation research (\$150,000). With these ongoing funds DPR will be able to conduct activities and enter into contracts necessary to support the development and evaluation of practical and scientifically sound mitigation strategies to further protect fieldworkers, pesticide handlers, and bystanders.

B. Background/History

DPR is charged with ensuring the orderly regulation of pesticides while protecting the health, safety, and welfare of the public and the protection of the environment pursuant to Food and Agricultural Code (FAC) section 11454. As part of DPR's program mandate to continuously evaluate pesticides in use, DPR determines whether the legal use of a pesticide product poses a significant adverse effect. A determination that a pesticide poses significant adverse effects can be based on human health risk assessment, indicator data (e.g., illness surveillance) or actions from other agencies (e.g., the Office of Environmental Health Hazard Assessment). For those pesticide uses that pose an unacceptable risk, DPR must impose mitigation measures in the form of regulations, use permit restrictions, or actions on the pesticide product.

The Worker Health and Safety Branch (WHS), in collaboration with other branches at DPR, has the lead responsibility for developing and implementing these mitigation measures.

Risk Assessments

Several data sources are used to determine the need for mitigation. One main source for identifying unacceptable pesticide exposures comes from the human health risk assessment (RA) process conducted by DPR scientists. The priority for initiating a RA is focused on the pesticides that pose the greatest risk to human health. Given DPR's mandate to regulate pesticides while protecting human health, DPR develops mitigation measures to reduce the risks that pesticide use may pose. The Budget Act of 2013-14 (Chapter 354, Statutes of 2013) (Assembly Bill 101) included budget bill language that set the minimum number of RAs completed by DPR each year to five. While this language was removed from subsequent Budget Acts, there is an expectation among stakeholders that DPR will continue to meet this goal. Prior to this, there was no specific requirement for DPR to meet a specific quota.

The development of mitigation measures is a complex, iterative, and interactive process which includes several elements:

- Assessing pesticide exposure both before and after mitigation measures are implemented;
- Developing enforceable mitigation strategies;
- Assessing the feasibility and effectiveness of proposed mitigation measures;
- Communicating findings and implementation strategies to the public;
- Developing final implementation measures through regulation, permits, or product actions; and

- Providing outreach and education to ensure compliance.

In addition, statutory mandates require the California Environmental Protection Agency and its boards, departments, and offices (BDOs) to take specific actions to ensure environmental justice in programs and policies (Public Resources Code 71110 et seq.). DPR changed its mitigation program approximately 10 years ago to address the specific requirements in Senate Bill 89 (Chapter 728, Statutes of 2000), adding a public participation component to ensure greater public participation in the agency's development, adoption, and implementation of environmental regulations and policies (Public Resources Code 72000 et seq.). Public participation provides valuable input into the development of effective and enforceable mitigation solutions and also adds to the complexity and time needed to implement mitigation.

Sources of Data Identifying the Need to Mitigate

Pesticide Illness Surveillance Program

Another source for identifying unacceptable pesticide exposure is data from the Pesticide Illness Surveillance Program (PISP). The PISP tracks all pesticide-related illnesses and injuries that are reported to the State each year. One major source of input is the information gathered by the county agricultural commissioners (CAC) during their illness investigations. Between fiscal years 2011 and 2013, an average of 762 pesticide-related illnesses/injuries per year was reported where DPR found that pesticide exposure had been at least a possible contributing factor.

New regulatory initiatives may spring from analysis of the cumulative database or in direct response to illness episodes. For example, DPR traced a series of fieldworker illnesses in the 1980s to propargite exposure; in response, DPR extended the restricted entry interval beyond what was on the U.S. Environmental Protection Agency (U.S. EPA)-approved product label.

Resource History
(Dollars in thousands)

Program Budget	2010-11	2011-12	2012-13	2013-14	2014-15
Authorized Expenditures	6,498	6,668	6,872	7,047	6,772
Actual Expenditures	7,316	6,879	6,232	6,946	6,643
Revenues					
Authorized Positions	37.9	37.6	36.6	38.6	39.2
Filled Positions	35.1	35.8	35.1	35.1	38.6
Vacancies	2.8	1.8	1.5	3.5	10.6

Workload History

Workload Measure	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
New Pesticides Entering Mitigation	0	0	2	4	2	5
Mitigations Already in Progress	9	7	4	6	10	7
Mitigations Completed	2	3	0	0	3	4
Mitigation Addendums	0	0	0	0	5	1

C. State Level Considerations

This proposal supports four goals of DPR's Strategic Plan:

Goal 1 is *"to Protect People and Environment by assuring California's environment is not adversely affected by pesticides and that all people are protected from unacceptable pesticide risks"*. This proposal supports this objective by conducting mitigation (exposure reduction) efforts when health risk assessments suggest overexposures may occur when a pesticide is used as labeled. Scientists in DPR's Worker Health and Safety Branch (WHS) review technical and scientific data, pesticide illness data, and registered product labels to assess public health and worker impacts of pesticide use. WHS scientists conduct field studies to monitor pesticide exposure to workers performing routine tasks to find out if extra protective measures are needed. DPR bases mitigation proposals on scientific data, field implementation, enforceability, and risk management guidance.

Goal 3 is to *"Enforce and Achieve Compliance by maintaining and continuously improving strong and equitable compliance and enforcement programs to ensure people and the environment are not exposed to unacceptable pesticide risks"*. This proposal supports this goal by providing training, outreach, and guidance to the regulated community to ensure proper and effective implementation of mitigation measures. WHS scientists lead and also assist the Enforcement Branch in these outreach efforts.

Goal 4 is to *"Ensure Environmental Justice by protecting all people in California, regardless of race, age, culture, income, or geographic location, from adverse environmental and health effects of pesticides"*. Risk management is the evaluation and selection of mitigation options to reduce risk to an acceptable level. Risk managers use risk assessment as an important tool to determine a level of pesticide exposure that is acceptable (that is, with little chance of harm). Mitigation measures to reduce exposures are drafted and presented to stakeholders. Stakeholders can include pesticide applicators, growers, grower advocates, community groups, workers, worker advocates, industry, and other interested parties. These stakeholder meetings occur throughout the state, specifically in areas where the pesticide in question is predominantly used. DPR's goal is to obtain input throughout the process to ensure all interested parties have a voice in formulating a mitigation strategy.

Goal 6 is *"Communication and Outreach by promoting an understanding and awareness of DPR programs, priorities, initiatives and accomplishments through effective external communications, outreach and public education"*. Once exposure reduction strategies are in place, WHS and other departmental scientists coordinate their implementation with registrants, agricultural organizations, and other stakeholders. Staff from WHS and the Enforcement Branch train CAC staff when new mitigation measures are introduced in the field. WHS staff meets with growers and applicators to observe applications made using the mitigation measures, to discuss any problems the measures may cause, and to check that the measures are effective. WHS staff also develops outreach materials for farmworkers and pesticide applicators and prepares health and safety recommendations for reevaluations managed by the Registration Branch.

D. Justification

In 2014, two major changes occurred that led to an increased workload for WHS:

1. **Chapter 584, Statutes of 2013 (Assembly Bill 304, Williams)** went into effect. Assembly Bill 304 requires DPR to adopt mitigation measures for pesticides determined to be a toxic air contaminant within two years of the department determining that additional mitigation measures are necessary. The Toxic Air Contaminant Law (FAC sections 14021-14027) requires DPR to evaluate pesticides in air and, in cooperation

with scientific reviewers, determine their potential health risks. If a pesticide is determined to be a toxic air contaminant, meaning the pesticide may pose a potential hazard to human health; DPR develops mitigation measures, in consultation with other agencies. With the passage of Assembly Bill 304, DPR is now required to adopt mitigation measures within two years. Prior to this, there was no specific timeframe established to complete mitigation.

2. **The Budget Act of 2013-14 (Chapter 354, Statutes of 2013) (Assembly Bill 101)** included budget bill language that set the minimum number of risk assessments completed by DPR each year to five. Prior to this, there was no specific requirement for DPR to meet a specific quota. In the 10 years prior to this requirement, DPR produced anywhere from zero to four risk assessments annually. With this recent increase in the minimum number of risk assessments to be completed each year, there is also a concurrent need to develop mitigation for unacceptable exposures identified in those risk assessments.

WHS branch does not have adequate resources to keep pace with the increased production of risk assessments and concomitant need for mitigation, in addition to the legal requirement to complete mitigation in two years for pesticides identified as toxic air contaminants. Currently, WHS has 7.3 positions assigned to mitigation.

In calendar year 2014, risk assessments were completed for five pesticides (acephate, carbaryl, phosphine, propargite, and simazine) and all five require mitigation. In summary, in 2014, the WHS branch was to:

- initiate work on mitigation (but not complete it) for four pesticides (sulfuryl fluoride, carbaryl, propargite, and phosphine);
- complete mitigation efforts for three pesticides (MITC, endosulfan, and chloropicrin);
- continue working towards mitigation for two pesticides (naled and hydramethylnon); and
- conduct training/outreach on new use requirements for two fumigants.

Currently, DPR has three additional pesticides (acephate, simazine, and deltamethrin) awaiting mitigation and anticipates an additional four to five pesticides entering the mitigation process as those risk assessments are scheduled for completion by December 2015. While DPR can accomplish its base workload to develop mitigation for about three to four pesticides annually with existing staff, the backlog of pesticides that need mitigation will continue to increase without additional resources as five new risk assessments are produced annually.

Mitigation Activities

Because no two pesticides and risk assessments are the same, no two mitigation efforts are the same. The time required to complete each task will be different for each pesticide. While it may only take 12 months for data collection, analysis, and completion of the scoping document for one pesticide, it may take up to 24 months for another. However, the following activities are typically performed by staff in WHS to develop and implement mitigation measures:

1. Write scoping documents that lay the groundwork for assessing human exposure and the adequacy of existing mitigation measures identified on pesticide product labels. This involves review of: pesticide labels; pesticide use data; pesticide illness data; and existing regulations and current use-permit conditions.
2. Review pesticide-registrant data and the open literature for worker exposure to pesticides to assess the degree of mitigation needed to protect workers.
3. Conduct field observational studies to identify California-specific worker-exposure scenarios that will aid in the development of exposure assessments and mitigation.

4. Conduct worker-exposure studies (e.g. by collecting hand-rinse samples, glove and clothing samples, air samples, etc.) to assess California-specific worker-exposure scenarios for developing mitigation measures where there are gaps in our knowledge of worker exposure under existing and/or new application technologies.
5. Consult with pesticide registrants to develop and review research needed to support effective and scientifically sound mitigation.
6. Conduct field work to determine the effectiveness and practicality of proposed mitigation measures prior to implementation (as resources allow).
7. Consult with stakeholders on mitigation measures under development for both workers and the general public.
8. Develop regulations and permit conditions that provide an enforceable framework for mitigation.
9. Review and propose revised product-label language to ensure mitigation measures are adequate to protect workers.
10. Conduct outreach and education to maximize understanding and compliance with mitigation measures.
11. Conduct trend analysis of the pesticide illness data to determine success of mitigation.

As a result of the complex and interactive nature of the tasks involved, it takes a minimum of two to three years to complete the development and implementation of mitigation measures for one pesticide.

In order to improve our ability to manage the increased work load and meet the two-year legal requirements for toxic air contaminant mitigation, the positions requested will achieve the following:

1. The Senior Environmental Scientist will write scoping documents; serve as lead on observational studies; assist with exposure monitoring work; serve as lead on meetings and consultations with stakeholders on proposed mitigation; develop regulations and permit conditions; and conduct outreach and education to maximize compliance with adopted mitigation measures.
2. The Research Scientist III will take lead responsibility for: exposure monitoring research conducted to meet the needs of risk assessment and mitigation; consult with risk assessors on data gaps in the risk assessment process; write study protocols, reports and articles in peer reviewed journals; conduct worker-exposure studies to assess California-specific conditions; and assess effectiveness of mitigation measures implemented to protect human health.

This justification is based on actual experience DPR has gained in developing and implementing mitigation measures designed to reduce the risk of pesticide exposure.

E. Outcomes and Accountability

This proposal will allow DPR to meet its strategic goal to protect human health and assure that workers are protected from pesticide risks by improving our ability to develop and implement mitigation measures annually and better prepare us to meet the two year timeframe required in law. Once additional staff are hired and trained, DPR will augment its ongoing mitigation activities including:

1. Prepare scoping documents to assess existing worker-exposure metrics and evaluate current mitigation measures on labels, in regulation, and in permit conditions.
2. Conduct field observational studies that lead to mitigation development.
3. Conduct worker-exposure studies to evaluate effectiveness of mitigation strategies and the need for further protective measures.
4. Initiate, coordinate, and solicit input from stakeholders on mitigation measures under development
5. Prepare regulations and permit conditions in order to implement effective and enforceable mitigation measures.
6. Conduct outreach and education to stakeholders to improve compliance with the adopted mitigation measures.
7. Conduct trend analysis of the pesticide illness data to determine success of mitigation.
8. Maintain the mitigation Web page to keep the public updated on DPR's progress in protecting human health: http://www.cdpr.ca.gov/docs/whs/mitigating_exposure.htm

In addition, the requested contract funds for a meeting facilitator and mitigation research will also help us to keep pace with the mitigation needs by augmenting our ability to conduct productive public meetings and perform the research needed to develop effective and scientifically sound mitigation measures.

Projected Outcomes

Workload Measure	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
New Pesticides Entering Mitigation	5	5	5	5	5	5
Mitigations Already in Progress	7	10	11	11	10	11
Mitigations Completed	4	4	5	6	4	
Mitigation Addendums	1	1	0	0	0	0

F. Analysis of All Feasible Alternatives

1. Do nothing.

Pro – No additional costs to the State of California.

Con – Current staffing and equipment resources are inadequate to mitigate the increasing number of pesticides that have gone through the risk assessment process. Under this scenario, it will result in a backlog of pesticides in need of mitigation. We will also be unable to meet our mandated requirement to develop mitigation in two years for pesticides determined to be toxic air contaminants.

2. Appropriate \$482,000 and two positions to mitigate pesticides that have completed the risk assessment process.

Pro – This alternative would allow DPR to direct resources to meet priorities, legislative requirements, and workload needs.

Con – This alternative would require additional resources as well as initially requiring program time for recruiting, hiring, and training.

3. Contract with interdepartmental or external consultants.

Pro – Consultants would employ staff with the appropriate expertise to develop effective and scientifically sound mitigation measures.

Con – This alternative would require additional contracting dollars from the State. In addition, the consultant's access to critical information would need to be legally formalized with a confidentiality agreement to maintain the security of pesticide registration information and illness data. Aside from time/resources spent on developing contracts, staff will also be required to monitor and manage it and this would take time away from working on mitigation activities. In addition, staff would still need to develop regulations, permit conditions, and take product actions in order to implement the increased number of mitigation measures developed by outside contractors.

4. Redirect from within DPR's existing resources.

Pro – Redirecting existing staff would not require additional resources.

Con – Staff is currently not available to implement this alternative. Redirecting these resources would require reductions in other critical program areas. Time and resources would also be required to get redirected staff up to speed on the mitigation processes/procedures.

G. Implementation Plan

Hiring plan to fill the two positions:

June 2016 – complete development of duty statements and position advertisements

August 2016 – complete the hiring process

August 2016 – submit paperwork for a vehicle purchase

September 2016 – amend facilitator contract to accommodate the increase in public meetings

October 2016 – complete the process to initiate a mitigation research contract

H. Supplemental Information

DPR anticipates relocating two part-time staff to share an existing public workstation, freeing up two cubicles for the new staff. With the increase in workload, DPR will need to purchase an additional vehicle. This vehicle will be used for staff to participate in monitoring studies as well as conducting public workshops. Monitoring studies are often located in remote locations and require pesticide monitoring equipment, tables, and supplies. Public workshops require equipment as well (projector, projection screen, microphone, speakers, signage, handouts, etc.), that would make taking them on an airline costly and burdensome. DPR is requesting that the equipment budget be ongoing. Although initially the purchase of a vehicle will be a one-time expense, we anticipate the need to purchase additional monitoring equipment depending on the pesticide under mitigation. For example, currently under mitigation is Sulfuryl Fluoride. Monitoring equipment had to be purchase to allow detection at the lowest possible level. This equipment alone cost \$36,000.

With additional monitoring, comes additional travel. Depending on the pesticide under mitigation and the equipment necessary to monitor its use, several staff may be required to travel to the monitoring site. If the site is not local, then additional travel costs (i.e., lodging, fuel, per diem, etc.) will be incurred.

DPR is also requesting \$150,000 for mitigation research contracts. Although, DPR staff will be conducting the majority of mitigation research, further research is likely necessary when there will be multiple pesticide active ingredients simultaneously moving through the mitigation process. Having funding available for mitigation research contracts will provide DPR with flexibility that will allow DPR to fulfill mandated time frames to complete its mitigation processes.

I. Recommendation

DPR recommends alternative #2, to appropriate \$482,000 and two positions to mitigate pesticides that have completed the risk assessment process. Approval of this alternative would allow DPR to meet its strategic goal to protect human health and assure that workers are protected from pesticide risks by improving our ability to develop and implement mitigation measures annually and better prepare us to meet the two year timeframe required in law.

If not approved, DPR will continue to lack the staffing and resources to adequately mitigate the increasing number of pesticides that have gone through the risk assessment process resulting in a backlog. In addition, DPR will be unable to adequately meet the legal requirement to complete mitigation in two years for pesticides identified as toxic air contaminants.

BCP Fiscal Detail Sheet

BCP Title: Mitigation of Pesticide Impacts on Workers

DP Name: 3930-001-BCP-DP-2016-GB

Budget Request Summary

	FY16					
	CY	BY	BY+1	BY+2	BY+3	BY+4
Positions - Permanent	0.0	2.0	2.0	2.0	2.0	2.0
Total Positions	0.0	2.0	2.0	2.0	2.0	2.0
Salaries and Wages						
Earnings - Permanent	0	152	152	152	152	152
Total Salaries and Wages	\$0	\$152	\$152	\$152	\$152	\$152
Total Staff Benefits	0	68	68	68	68	68
Total Personal Services	\$0	\$220	\$220	\$220	\$220	\$220
Operating Expenses and Equipment						
5301 - General Expense	0	5	5	5	5	5
5302 - Printing	0	2	2	2	2	2
5304 - Communications	0	4	4	4	4	4
5320 - Travel: In-State	0	23	23	23	23	23
5322 - Training	0	2	2	2	2	2
5324 - Facilities Operation	0	22	22	22	22	22
5340 - Consulting and Professional Services -	0	170	170	170	170	170
5346 - Information Technology	0	6	4	4	4	4
5368 - Non-Capital Asset Purchases - Equipment	0	24	24	24	24	24
539X - Other	0	4	4	4	4	4
Total Operating Expenses and Equipment	\$0	\$262	\$260	\$260	\$260	\$260
Total Budget Request	\$0	\$482	\$480	\$480	\$480	\$480

Fund Summary

Fund Source - State Operations						
0106 - Department of Pesticide Regulation Fund	0	482	480	480	480	480
Total State Operations Expenditures	\$0	\$482	\$480	\$480	\$480	\$480
Total All Funds	\$0	\$482	\$480	\$480	\$480	\$480

Program Summary

Program Funding						
3540055 - Mitigation of Human Health Risk	0	482	480	480	480	480
Total All Programs	\$0	\$482	\$480	\$480	\$480	\$480